

# THE MINERAL INDUSTRIES OF THE SOUTHERN BALKANS

## ALBANIA, BOSNIA AND HERZEGOVINA, CROATIA, MACEDONIA, SERBIA AND MONTENEGRO, AND SLOVENIA

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### ALBANIA

Mineral deposits that usually have been associated with Albania include those of chromite, copper ore, natural gas, nickeliferous iron ore, and petroleum. Of the metal ores, only chromite was mined in 2003. From the 1960s through the late 1980s, Albania was among the world's top three producers and exporters of chromite. Although Albania's chromite output remained insubstantial compared with routine production levels reached during the 1960s through the late 1980s, the output of marketable chromite (concentrate and direct shipping ore) increased by about 7% in 2003 compared with that of 2002. The output of ferrochromium also showed recovery with a 54% increase in output compared with that of 2002 (table 1).

Dolomite, gypsum and marble, phosphate rock, and other industrial minerals have been worked only intermittently during the past several years. The production of petroleum, coal, and natural gas declined by about 14%, 11%, and 1%, respectively, compared with analogous output levels in 2002 (table 1).

In 2003, Albania's gross domestic product (GDP) grew by about 7.6% compared with that of 2002. This growth rate, albeit diminished in comparison with the rate of growth reached in 2000, continued to be fueled in large measure by transfers from abroad (more than 25% of GDP) in the form of donations, remittances, and some inflow of international capital (Central European Trade and Business Information Center, 2004). In 2002, industry represented about 24% of GDP, of which the value of output of the mining and quarrying sector represented about 11% of GDP. Industrial production increased by about 2.7% compared with that of 2002, of which the mining and quarrying sector grew by only 1% (World Bank Group, The, 2003).

The level of foreign investment in Albania's minerals sector had not appreciably changed since 2000. The ferrochromium plant at Elbasan was under the operational management of the Italian ferrochromium producer Darfo S.p.A. Plans to put the Burrel ferrochromium plant into full operation in 2002, however, did not materialize. The Turkish copper smelting concern Ber-Oner Madencilik San ve Tic As which, in 2000, was granted a 30-year concession to operate Albania's copper industry (mines and processing facilities in the Lezhe, the Midrite, and the Puke districts), continued its work, although copper production during the year was not reported. Ber Oner's work included the reconstruction of the Munelle copper mine and plans for a similar modernization at the Fushe Arrez copper beneficiation plant (Kocibelli, 2003).

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### BOSNIA AND HERZEGOVINA

Bosnia and Herzegovina remained a federation that comprised two constituent regions, the Federation of Bosnian Moslems and Croats (FBC) and the Republika Sprska (RS), which accounted for about 51% and 49%, respectively, of Bosnia and Herzegovina's territory. This organization was an outcome of a series of compromises that led to peace accords between the factions involved in a civil war in the 1990s.

Bosnia and Herzegovina's mineral resources included bauxite, coal, industrial minerals, iron ore, and lead and zinc. These resources and their mining and processing facilities, however, continued to be exploited in two politically distinct regions with distinct administrative structures but within a formal national government organization.

In 2003, the country's real GDP increased by about 3.5% compared with that of 2002 (International Monetary Fund, 2004, p. 29, 30). The FBC's share of Bosnia and Herzegovina's GDP amounted to about 67%; this was an increase of about 3.8% compared with that of 2002. The real GDP of the RS increased by about 2.4% compared with that of 2002. Foreign investor interest in the country's minerals sectors appeared to have increased especially with those sectors involved with nonferrous metals and steel.

In 2003, industrial production in the FBC increased (value basis) by 4.8% compared with that of 2002. The value of mining output represented about 2.3% of the value of the FBC's GDP. The mining sector as a whole increased the value of output by about 4.6% compared with that of 2002. The output of the metal ore mining and coal and peat mining branches reported increases of 17.2% and

6.1%, respectively, compared with their production levels in 2002. Other mining and quarrying operations, however, collectively reported losses of about 3.8% during the same period. The FBC reported increases of more than 13% in the production of metals and of almost 9% in the output of nonmetallic and industrial minerals. The production of processed mineral fuels declined by about 7% compared with that of 2002 (Federation of Bosnia and Herzegovina, 2004). The FBC's exploitable mineral resources included coal, bauxite, gypsum, lead and zinc, magnesite, and rock salt. The FBC also operated the country's only plant that produced aluminum and steel.

In 2003, negotiations between Debis International Trading GmbH (a subsidiary of Daimler Chrysler AG) and Elektroprivreda BiH (EPBiH), which was the state-owned electric power company, ended without an agreement on power delivery prices which, at yearend, resulted in the termination of a 5-year contract between the parties. This contract had formed the basis of an agreement between Debis and Aluminij d.d. Mostar, which was the FBC's aluminum smelter, that called for steady sales of electric power to Mostar by Debis in exchange for primary aluminum. Because EPBiH provided about two-thirds of Mostar's electricity requirements, the dissolution of the long-term power agreement between Debis and EPBiH affected the future development of FBC's Mostar Aluminum Plant and regional bauxite mining (Reuters, 2003a; Sito-Sucic, 2003a).

Following the completion of major facility modernization and expansion in 2002, Mostar's production of primary aluminum increased to about 110,000 metric tons (t), or by almost 7% compared with that of 2002. In early 2003, Glencore International AG of Switzerland indicated interest in acquiring shares of stock in Mostar once privatization of the enterprise becomes certain. Glencore remained Mostar's source of alumina feedstock (Metal Bulletin, 2003b). Although Mostar's alumina refinery has not been operational for more than 10 years, bauxite production in the FBC continued to show major increases with output in 2003 rising eightfold compared with that of 2002 to 344,000 t, or about 60% of total bauxite output in Bosnia and Herzegovina (Srpska Republika Institute of Statistics, 2004b, p. 6; World Bureau of Metal Statistics, 2004, p. 6).

BH-Steel-Zeljezara Ltd. (B-H Steel), which was located in the FBC, was Bosnia and Herzegovina's sole producer of crude steel. In 2003, B-H Steel continued to operate as a 50-50 joint venture between the Government of the FBC and Kuwait Consulting & Investment Co. During the year, the Ispat Group of India began discussions with the B-H Steel stockholders to acquire a substantial share of the company's stock. A package acquisition of such attendant facilities as the Lukavac coking plant, the Doboj limestone mine, and the Ljubija iron ore mine also was considered (Reuters, 2003b). By yearend, however, Ispat was able to form a joint-venture arrangement with the Government to operate the Lukavac facility and to acquire a 51% share in the new operation, which became formally known as Global Ispat Koksna Industrija Lukavac. Ispat reported a \$45 million investment plan for Lukavac of which 50% would be earmarked for use as working capital; 19%, to finish the installation of a new coke battery; and 16%, to help pay off the enterprise's debts (Sito-Sucic, 2003b).

In 2002, B-H Steel produced 70,000 t of crude steel, which was the enterprise's lowest level of production since 1996 when steel production was resumed. About 71% of total steel produced came from open hearth, and 29%, from electric arc furnaces (EAF) (International Iron and Steel Institute, 2004, p. 33). Plans that were developed in 2002 to install a new 100-t EAF, a ladle furnace, and a billet caster began to be realized in 2003. The new equipment, which was supplied by the Italian metallurgical plant and equipment manufacturer Danieli SpA underwent installation at a total cost of about \$25.3 million. The new equipment was to be fully installed by yearend 2004 (Metal Bulletin, 2003c).

In 2003, D.D. Fabrika cementa Lukavac, which received a major investment package in 2002 for modernization, showed marked increase in its stock value (about 23% compared with that of 2002). Full operation at the cement plant was to start in 2004. Modernization plans that were completed at the Kakanj Cement Plant (a subsidiary of the HeidelbergCement Group of Germany) included a coal grinding plant and the development of a new quarry (HeidelbergCement AG, 2004, p. 56).

Energy-related activities during the year included an agreement between the FBC and the RS to harmonize petroleum prices throughout Bosnia and Herzegovina, which followed an agreement by the entities in November 2002 to adopt a uniform tax on fuel throughout the country. One of the main objectives of these agreements was to create a positive investment climate (Abaspahic, 2003). Ispat announced plans to install more coking batteries in the Lukavac coke plant that would double production capacity to 1.4 million metric tons (Mt) by 2005 (Reuters, 2004).

In 2003, industrial output in the RS, in terms of volume, increased by 7.3% compared with that of 2002 (International Monetary Fund, 2004, p. 29-30). Mining and quarrying represented about 10% of total industrial output. Industrial minerals processing, coke and refined petroleum production, and metals production respectively accounted for 4.3%, 1.9%, and 1.5%, respectively, of industrial output (Srpska Republika Institute of Statistics, 2004a).

In 2003, the RS's metal mining and processing sectors reported mixed results. The production of direct shipping iron ore (Fe content greater than 42%) amounted to 83,490 t, which was more than double the output level reached in 2002. The production of lower grades of iron ore ceased and the production of iron ore concentrates declined by more than 75% to 43,494 tons (Srpska Republika Institute of Statistics, 2004b, p. 6).

In comparison with 2002, bauxite production showed significant increases; output increased by more than threefold to 229,317 t. After a production hiatus in 2002, alumina production in 2003 amounted to 35,011 t, which was about 13% greater than that reported for 2001 (Srpska Republika Institute of Statistics, 2004b, p. 6). Production ceased at the Birac alumina plant owing to a dispute that arose between the RS's Government and the majority Lithuanian stockholders of the Ukio Banko Investicije Grupe over terms of prior privatization. An agreement between Ukio and the RS's Government was reached, which created conditions more favorable for Ukio and allowed refining operations at Birac to restart (Metal Bulletin, 2003a). Ukio planned to upgrade Birac's refining capacity to 300,000 metric tons per year of alumina. Ukio also reached an agreement with the Milici Mine to supply the Birac refinery with about 411,000 t of bauxite in 2004 (Dardic, 2003). The production of lead and zinc concentrates has not resumed since their last

reported production in 2001 when 3,271 t and 3,432 t, respectively, were produced (Srpska Republika Institute of Statistics, 2004b, p. 6).

Industrial mineral production included bentonite, ceramic and refractory clays, gypsum, kaolin, limestone, magnesite, marble, and silica. In 2003, the production of ceramic clay and bentonite in RS increased to 35,861 and 16,500 t, respectively, compared with their output levels in 2002 of 13,050 and 4,340 t. Dolomite production, which registered a slight output increase compared with that of 2002, amounted to 96,776 t (Srpska Republika Institute of Statistics, 2004b, p. 6). Overall, the mining and quarrying of industrial minerals represented about 2.1% of total industrial output (Srpska Republika Institute of Statistics, 2004a).

The RS produced about 1.45 Mt of brown coal, which was an increase of about 11% compared with production reached in 2002. During the same period, the production of lignite increased by about 51% to 2.1 Mt (Srpska Republika Institute of Statistics, 2004a).

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## CROATIA

In 2003, Croatia's GDP grew at a rate of 4.3% compared with that of 2002; total industrial production (volume) rose by 4.1% (Crostat, 2004, p. 6; International Monetary Fund, 2004). Exports by Croatia's extractive industries (mining and quarrying), collectively amounted to \$129 million, or about a 31% increase compared with exports in 2002. Similarly, imports amounted to \$1.14 billion, which was an increase of about 15% compared with those of 2002. In 2003, the value of output of the mining and quarrying sector, as a whole, rose by more than 17% compared with that of 2002; this represented about 5.3% of the gross value output of industry (Crostat, 2004, p. 63). The mining and processing of industrial minerals and metals occupied a minor role in Croatia's economy. Croatia's mineral industry continued to be dominated by the natural gas and petroleum extracting and refining sectors. Natural gas production increased by about 3.2% to 2.19 billion cubic meters compared with that of 2002. Petroleum production, however, declined by about 5% to 1.05 million t.

One of the major developments in the mineral fuels sector was the acquisition of 25% of stock shares of Industrija Nafta d.d. Zagreb (INA) by Hungary's oil and gas producer MOL PLC. MOL's bid, which amounted to \$505 million, won out over competitive bids from Austrian and Russian firms (Oil & Gas Journal, 2003). The proposal to extend Russia's Druzhba pipeline to Croatian port facilities in the Adriatic Sea remained another major planning subject in the oil and gas sector. The Druzhba-Adria pipeline project envisaged the extension of the Druzhba main line; this would allow crude petroleum to be delivered from Russia and other member countries of the Commonwealth of Independent States through Ukraine, Belarus, Slovakia, and Hungary to Croatia's Omisalj Port, which is located on the northern side of Krk Island in the Adriatic. Crude petroleum would flow from Samara in Russia to Omisalj over a distance of about 3,200 kilometers. An agreement to implement the proposed project was signed in mid-December 2002 by representatives of all the transit route countries. The project's cost would total about \$300 million (Alexander's Gas & Oil Connections, 2003a.) The implementation of the project was rescheduled for early 2005 from 2003 owing to such issues as timely allocations of funds and capacity expansion requirements at existing lines (Alexander's Gas & Oil Connections, 2003b).

Croatia continued to produce a variety of industrial minerals, largely for domestic use. Bentonite production rose substantially by about 13% compared with that of 2002. Commodities associated with construction materials production also showed gains; these included gypsum (14%) and sand and gravel (5%). Cement production increased by about 8% compared with that of 2002.

Metal production in 2003 appeared to be limited to alloys and semimanufactures of aluminum and to crude steel and steel semimanufactures. Although small, steel production rebounded with a 28% increase compared with that of 2002. The country's steel production came entirely from EAFs at Zeljezara Sisak d.d. (75,000-t/yr capacity) and Jadranska Zeljezara Split (170,000-t/yr capacity). Privatization plans involved both steel mills during the year (table 6).

Efforts by the Croatia's Privatization Fund (HFP) to privatize Zeljezara Split were not successful. HFP's offering amounted to 100,673 shares with a value of \$176 per share. The results of the offering in 2003 reportedly would be studied for possible re-offering

in the following year (Metal Bulletin, 2003). The privatization of Zeljezara Sisak, however, was undertaken successfully in early 2003. Russia's Mechel Steel Group acquired the Zeljezara Sisak steel plant with provisions that required the retention of the enterprise's 1,700 workers. Mechel also indicated plans to invest almost \$18 million in Zeljezara Sisak for operation and modernization (Reuters, 2003).

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## MACEDONIA

The Former Yugoslav Republic of Macedonia (Macedonia) continued to achieve economic recovery in the aftermath of the ethnic conflicts and social tension 2 years earlier. In 2003, the GDP grew by 3.1% compared with that of 2002; industrial production recorded an increase of 4.7%. The output of the mining and quarrying sector, in terms of value, however, declined by about 39% (International Monetary Fund, 2004, p. 195; State Statistical Office of the Republic of Macedonia, 2004).

Nonferrous metals deposits were the chief sources of Macedonia's metal ores. Copper and lead-zinc ores were the main nonferrous metal ores with the latter having played a more-significant economic role. Lead-zinc resources amounted to about 44.4 Mt of ore with average grades of about 5.8% lead, 4.3% zinc, and 37 grams per metric ton silver. Total mining capacity was rated at about 2.5 million metric tons per year (Mt/yr) of lead-zinc ore. In 2003, proposals were studied to develop mining operations that would be sufficient to provide about 78% of the concentrates for existing smelters. The concentrate feedstocks (lead, zinc, and lead-zinc) shipped to the smelter would contain about 54,000 t/yr of lead and about 38,000 t/yr zinc. Smelting and refining facilities (Imperial process) at MHK Zletovo in Veles, apart from lead-zinc production, also produced such associated metals as cadmium, gold, and silver. Other nonferrous metals included antimony, arsenic, manganese, and nickel (Efremov, 2004).

In 2003, Macedonia's lead-zinc mining and processing industry faced several stoppages that stemmed from pollution-related closures, raw material shortages, and financial difficulties. In March, the Government closed the Zletovo smelter/refinery and chemicals facilities; these facilities were cited as major point sources of pollution, especially with respect to cadmium and sulfur dioxide. The closure of the Zletovo production facilities had a negative impact on the three mines that produced feedstock and disrupted battery production in Veles. After reopening in August, Zletovo's closure in October was largely due to financial problems and raw materials shortages (Dokovska, 2003).

In 2003 and 2004, the Government of Macedonia included its lead-zinc mines in the national privatization program. Located close to the border with Bulgaria, the Sasa (Makendonska Kamenica), the Rudnici Zletovo (Probistop), and the Toranica (Kriva Palanka) Mines had rated ore production capacities of 750,000 t/yr, 600,000 t/yr, and 450,000 t/yr, respectively. Total reserves of contained lead at the three mines were reported to be about 385,000 t, and those of zinc, about 310,000 t. The three lead-zinc mines were the sources of ore and concentrate for the Zletovo smelter/refinery. The Government indicated that past environmental liabilities would be the responsibility of the state. The privatization process, which was launched in 2003, stipulated that bids on tenders were to be accepted by April 2004 (Government of the Former Yugoslav Republic of Macedonia, 2004, p. 13).

Copper was produced by Semc-Corp. at the Bucim Mine in Radovis. Copper ore (porphyry), which graded 0.3% copper, was mined by open pit method from a total ore reserve of about 85 Mt. In 2003, copper production declined by about 50% to about 4,000 t compared with that of 2002. Exports of concentrate during the same period came to a halt (International Copper Study Group, 2004, p. 29). The Bucim mine also was listed among the major "environmental hot spots" in Macedonia by the United Nations in 2000 (United Nations Environment Programme, 2000, p. 9).

The downturns of production in the copper and lead-zinc branches of nonferrous metals production affected the performance of the entire metals mining sector, which registered an overall output reduction of 81% compared with output reached in 2002 (State Statistical Office of the Republic of Macedonia, 2004). Exports of nonferrous metals amounted to about \$40.7 million, which represented a decline of about 44% compared with exports in 2002. Imports of nonferrous metals amounted to about \$21 million, which was a decline of about 12% (National Bank of the Republic of Macedonia, 2004). Total exports of metal ores and scrap declined by about 28% compared with those of 2002; total imports, however, increased by more than 3.5 fold.

Macedonia's steel production was based entirely on scrap-fed EAFs at the Makstil A.D. steel mill (a subsidiary of Duferco Group) in Skopje. Makstil's slab output in 2003 amounted to 291,354 t, which was an increase of about 30% compared with that of 2002 and approached the enterprise's full capacity of 300,000 t/yr. Plate output in 2003 increased by about 16% to 305,111 t. Exports of steel in 2003, which were valued about \$251 million, increased by more than 60% compared with those of 2002 (National Bank of the Republic of Macedonia, 2004). A study of improving scrap delivery efficiency was undertaken in 2003 under a Southeast Europe

Enterprise Development Program, which was part of the International Finance Corporation. Best practices (environmental and financial) were to be assessed for collecting scrap (Southeast Europe Development Corporation, 2004).

Macedonia continued to produce bentonite, cement, feldspar, gypsum, sand and gravel, stone (carbonate and silicate), and other construction materials mainly for export. In 2003, the industrial minerals mining sector increased production by more than 53% compared with that of 2002. Industrial minerals and steel were expected to increase in importance to Macedonia's economy as inputs to reconstruction projects covering infrastructure and housing.

Lignite mining and petroleum refining were the only industries in Macedonia's mineral fuels sector. Lignite production in 2003 amounted to about 8.4 Mt (table 1). Imports of coal, coke, and coal briquettes were valued at about \$23.4 million, which was an increase of about 87% compared with imports during 2002. Domestic mining supplied about 70% of the fuel for the Bitola coal-fired electric power station, which accounted for more than 90% of the country's output of electricity generated by thermal electric power plants (Electric Power Company of Macedonia, 2004 p. 10, 14)

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## SERBIA AND MONTENEGRO

Serbia and Montenegro, which was a focal point of armed conflict in 1999 during the Kosovo crisis, continued to report postwar stabilization and overall economic progress. Major minerals-related policies by the Government in 2003 included a new law that allowed concessions to be granted for up to 30 years and firm provisions for compensation, competitive tendering, and legal protection (Reuters, 2003f).

In 2003, the GDP officially was reported to have risen by 3.0% compared with that of 2002 (International Monetary Fund, 2004, p. 195). Industrial production, however, declined by about 3% compared with that of 2002 owing mainly to the manufacturing sector. Electric power generation and mining and quarrying operations reported increases of about 3% and 1%, respectively, compared with their respective output levels in 2002 (Statistical Office of Serbia and Montenegro, 2004, p. 4).

In 2003, the aggregated output of the metals mining sector registered a decline of about 33% compared with that of 2002; the production of basic metal, however, rose by about 2%. Bauxite production declined by about 12% compared with that of 2002. Aluminum production, however, remained at about the output level of 2002, about 112,000 metric tons (t). The latest available foreign trade data report total exports of primary aluminum and aluminum alloy to have amounted to 116,535 t, which was almost an 18% increase compared with exports in 2001. Available data for 2003 (January to August), however, show a steep export decline compared with the same period in 2002 (Statistical Office of Serbia and Montenegro, 2003, p. 56).

In early 2003, the Privatization Council of Montenegro (PCM) scheduled Kombinat Aluminijuma Podgorica (KAP), which was Montenegro's alumina refining and aluminium smelting complex, for full denationalization. The PCM indicated that 100% of the company's assets were to be offered for sale, which included shares owned by the Government (65%) and by KAP employees (35%). The sale was aimed partly at restructuring KAP's accumulated debt which, reportedly, amounted to about \$120 million (Metal Bulletin, 2003a). To facilitate the privatization of KAP, the European Bank for Reconstruction and Development approved a \$2.4 million loan. A number of companies indicated interest in acquiring KAP. Among these were Glencore International AG of Switzerland, which had been KAP's operational manager and major aluminum producers in France, Norway, Russia, and the United States (Cagorovic, 2003; Reuters, 2003b).

In Serbia, 70% of the shares of Valjaonica Aluminijuma Sevojno (Seval) and Nissal Nis (Nissal) were to be offered for sale. Both facilities produced aluminum semimanufactures and some aluminum fabrications (Brooks, 2003).

Copper production at Serbia's RTB Bor copper mining, beneficiation, smelting, and refining complex declined sharply to 26,400 t of copper in concentrate from 36,900 t in 2002. Total refined copper production fell by about 62% to 13,700 t. The shortfalls in output were due partly to a major restructuring that was undertaken at the complex in preparation for privatization and foreign investment. Serbia and Montenegro's exports of unwrought copper in 2002 declined by 20% to about 44,000 t. In 2003, available 8-month export data show exports of unwrought copper at about 20% of the export level of unwrought copper during the same period in 2002. Exports of semimanufactured copper remained at about the same level as that of 2002; partial trade returns for 2003 indicate a decline of about 8%. Serbia and Montenegro's imports of copper ore and concentrate in 2002 amounted to about 37,000 t, or about 26% less than in 2001; imports during the first 8 months of 2003 amounted to about 24% of those during the same period in 2002 (Statistical Office of Serbia and Montenegro, 2003, p. 56).

Bor's management and Mytilineos Holdings S.A. (Mytilineos) of Greece negotiated Mytilineos's renewal of lease arrangements for the Bor smelter. Mytilineos's earlier arrangement for management of the Bor smelter was to expire in 2004 (Kukic, 2003b). This agreement gave Mytilineos exclusive rights to the distribution of the major part of Bor's smelter output of copper, gold, and silver. In return, Bor received capital that was sufficient to maintain its operation of mines and plants. Also, in 2003, Mytilineos continued to set the acquisition of Bor as an important part of its investment strategy (Mytilineos Holdings S.A., 2004, p. 17, 47).

Bor and several major foreign mining companies also held discussions during the year regarding exploration and mining concessions on Bor properties and, in particular, the Crni Vrh copper ore deposit, which reportedly held commercial values of gold, lead, silver, and zinc. Rio Tinto plc of the United Kingdom and Phelps Dodge Corporation of the United States were among the companies interested in working in the Bor area (Danas, 2003; Reuters, 2003c; Mytilineos Holdings S.A., 2004, p. 17, 47).

The production level of lead-zinc ore and lead and zinc metals remained low mainly because of the uncertain status of the Trepca lead-zinc mining, beneficiation, and smelting complex in the Serbian Province of Kosovo, which remained under a United Nations (UN) protectorate status. The output of lead and zinc ore from January to August 2003 amounted to 311,000 t; the production of primary refined lead during the same period amounted to 192 t. Zinc production amounted to only 62 t compared with 1,478 t in 2002 (Statistical Office of Serbia and Montenegro, 2003, p. 56).

The UN reportedly undertook the development of a privatization program for Trepca during the year. Apart from mining and processing facilities in Kosovo, Trepca's operations also included four mines in Serbia proper. Three of the four mines (Grot, Lece, and Suva Ruda), which are located in the south near Kosovo, were in the process of becoming separate mining companies under the auspices of Serbia's Ministry of Energy and Mines. The management of the remaining mine (Veliki Madjan), which is located in western Serbia, elected to continue to operate as part of Trepca. The Suva Ruda Mine was the largest of the four mines with a capacity to produce more than 200,000 metric tons per year (t/yr) of lead-zinc ore. The ore at the Lece Mine contained gold in addition to lead and zinc. All four operations had been able to produce only sporadically during the previous 3 years (Reuters, 2003d).

In 2003, the management of Zorka Obojenini Metali, which was Serbia's sole zinc smelter and refinery, announced plans to tender a leasing arrangement for the smelter. The smelter-refinery ceased operations earlier in the year owing to cumulative financial losses connected with civil and regional conflicts from 1991 to 1999. The Zorka zinc plant, which was last modernized in 1976, had a rated electrolytic zinc production capacity of 32,000 t/yr. The last effective output at the plant appeared to be in 2001 when about 13,500 t of zinc was produced. Spokespersons for the enterprise indicated that an investment of more than \$750,000 would be needed to overhaul the plant. At yearend, discussions on the leasing of the zinc smelter-refinery were initiated between Zorka's management and the Binani Group of India (Kukic, 2003a).

Serbia and Montenegro's crude steel output rose by about 21% to about 722,000 t in 2003. Steel production was based at Sartid AD in Serbia and at Zeljezara Niksic in Montenegro. With all iron ore production having been discontinued in 2000, most of the country's steel output was based on imported iron ores and concentrates. In 2003, imports of iron ore between January and September amounted to 534,000 t, which were more than twice the total imports recorded in 2002. Exports of flat-rolled steel during the same period amounted to 960,000 t, which was a 48% increase compared with those of 2002 (Statistical Office of Serbia and Montenegro, 2003, p. 48-49).

Serbia and Montenegro's iron and steel sector was privatized during the year. Despite antimonopoly review by seven regional steel-producing countries and initial labor union-related issues, U.S. Steel Balkan d.o.o. (a subsidiary of U.S. Steel) acquired Sartid AD (Metal Bulletin, 2003c; U.S. Steel Corporation, 2003). U.S. Steel's acquisition cost \$23 million, which included six Sartid subsidiaries. Additionally, U.S. Steel announced plans to invest about \$150 million during the subsequent 5-year period to repair and modernize Sartid's facilities, whose rated steelmaking capacity amounted to about 2.4 Mt/yr. The Government of Serbia confirmed Sartid's sale in July in response to several international claims against the sale of the steelworks (Reuters, 2003e). The Government of Montenegro offered an international tender for the sale of almost 58% of the stock shares of Zeljezara Niksic that had a value of about \$81 million. Bids from steel producers in Austria, Bulgaria, Russia, and Switzerland were recorded. Total crude steelmaking and steel product capacities at Niksic amounted to about 200,000 t/yr and 600,000 t/yr, respectively (Metal Bulletin, 2003b; Reuters, 2003a).

The total output (in value) of industrial minerals increased by about 6% compared with that of 2002. Initial indicators for January to August for salt production point to about a 77% increase in physical output compared with output during the same period in 2002. Analogous indicators show production downturns for cement, crude magnesite, lime, quartz sand, and sand and gravel. Data for the same period do not record any output of asbestos (Statistical Office of Serbia and Montenegro, 2003, p. 15).

The total output value of Serbia and Montenegro's mineral fuels/extractive industries rose by about 4% compared with that of 2002. The value of coal production increased by 6%; that of natural gas and petroleum production declined by about 4% (Statistical Office of Serbia and Montenegro, 2004, p. 9). Developments in Serbia and Montenegro's mineral fuels sector included a 15-year loan valued at €60 million by the European Bank for Reconstruction and Development to modernize and raise lignite production at the Tamnava West Mine in Serbia. Serbia's electric power utility Elektroprivreda Srbije, which owned and operated the mine, planned to double lignite production to 12 Mt/yr (Dow Jones Business News, 2003). Exploration for oil and gas offshore Montenegro was continued by Ramco Energy plc of the United Kingdom at the Ulcinj contract block. Preliminary assessments at the Ulcinj block point to Pleistocene- and Pliocene-age gas deposits and several medium to large carboniferous petroleum deposits. These deposits were believed to be accessible at water depths in excess of 300 meters. In 2003, Ramco restructured its joint-venture agreement with Serbia's oil company, Jogopetrol Kotor, which became a subsidiary of the Hellenic Petroleum Group of Greece in 2002. Ramco's stake amounted to 40% of the stock in the joint venture formed to explore for and develop Serbia and Montenegro's oil and gas assets (Ramco Energy plc, 2004, p. 5).

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## SLOVENIA

Slovenia's mineral extractive industries produced modest quantities of coal, natural gas, petroleum, and a variety of industrial minerals. To meet most industry needs for minerals, Slovakia relied largely on imports. The latest aggregated data for 2003 report that imports of crude materials other than fuels exceeded exports in the same category by more than threefold; imports of mineral fuels exceeded exports by more than sixfold (Statistical Office of the Republic of Slovenia, 2004, p. 53, 54).

Slovenia's economy continued to grow as the GDP in 2003 amounted to \$39.1 billion based on purchasing power parity, which was an increase of about 3.7% compared with that of 2002. The mining and quarrying sector's share of the GDP amounted to about 0.9% (International Monetary Fund, 2004, p. 31). The total volume of industrial production increased by about 1.4% compared with that of 2002; the volume of output of the mining and quarrying sector rose by about 5.5%. The output of nonmineral-fuels-related mineral commodities increased by about 10.3% compared with that of 2002; the output of mineral fuels and refinery products rose by 3.6% (Statistical Office of the Republic of Slovenia, 2004 p. 38, 39).

The main components of Slovenia's metallurgical industries included primary aluminum production at Kidričevo (Talum d.o.o.) and three steel mills [Slovenske železarne (SŽ), which was a state-owned holding company that maintained ownership of SŽ Acroni Jesenice d.o.o. (Acroni); SŽ Metal Ravne d.o.o. (Metal Ravne); and Inexa Steel Ltd. (formerly Jekla Štore), which was a subsidiary of the Inexa Group of Sweden since 1999].

In 2003, Slovenia's total output of crude steel rose by about 13% compared with that of 2002. Steel production reached almost full capacity in 2003 in contrast to the preceding 5 years when production was strongly affected by the dissolution of the former Yugoslav market and a weak global and regional demand for steel.

The reversion of Inexa Store to Slovenian ownership was one of the noteworthy events in the steel sector in 2003. In midyear, Unior d.d., which was Slovenia's major toolmaking enterprise, acquired a majority stock holding in Inexa Store (60%) from Inexa AB of Sweden, which became a majority stock owner in Store in 1999 (Slovenia Business Week, 2003). Inexa Store, which was renamed Store Steel d.o.o., was an important regional producer of spring steels, and had already been a supplier of about 20% of its annual production to Unior.

Acroni reported positive yearend results, which included production increases of 23.7%, 20.6%, and 12.3% for heavy plate, hot-rolled strips, and finished products, respectively, compared with those of 2002. In addition, the company reported undertaking 33 investment projects, of which the new annealing line for finished electrical steel sheets and a new vacuum oxidizing degassing unit would play major roles in raising output and product quality (SŽ Acroni Jesenice d.o.o., 2004, p. 4).

Aluminum production increased by about 25% compared with that of 2002. In 2003, Talum produced almost 110,000 t of aluminum, which approached the plant's new capacity of 117,000 t/yr of aluminum (75,000 t in 2002). Efforts to privatize Talum, d.o.o., which was Slovenia's aluminum smelting and semimanufacturing company, gained initial momentum as regional and some major European aluminum producers vied to gain controlling interest in the enterprise (Metal Bulletin, 2003; Reuters, 2003a). The inability of bidders to resolve differences with the Government about electricity supply rates, however, forced the latter to suspend Talum's sale at the end of the year (Reuters, 2003b). An agreement between Talum and Hydro Norsk ASA of Norway was reached, which stipulated that Norsk purchase 70,000 t/yr of Talum's aluminum casthouse alloys through 2011. These purchases would be in addition to Norsk's purchases from Talum of 50,000 t/yr of aluminum extrusion ingots (Reuters, 2002).

The industrial minerals sector depended mainly on imported raw material. The latest available trade data for 2002 show net imports of bentonite, diamond (all grades), feldspar, fluorspar, gypsum magnesite, and salt. Among mineral fuels, total coal production increased by about 3% compared with that of 2002. Petroleum and natural gas production, however, declined by about 37% and 18%, respectively.

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TABLE 1  
ALBANIA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	1999	2,000	2001	2002	2003
METALS					
Bauxite	4,624	5,000	5,000	5000	5000
Chromium:					
Chromite, gross weight <sup>e</sup>	79,445	280,000	200,000	215,000	220,000
Marketable ore (41.6% Cr <sub>2</sub> O <sub>3</sub> )	64,597	117,000	86,000	82,000	85,000
Concentrate	6,837	3,400	--	9,000	10,000
Total marketable ore and concentrate	71,434	120,400	86,000	91,000	95,000
Ferrochromium	28,120	12,500	11,900	22,800 <sup>r</sup>	37,800 <sup>3</sup>
Copper:					
Ore:					
Gross weight	33,945	--	--	--	--
Concentrate	8,691	--	--	--	--
Cu content <sup>e</sup>	900	--	--	--	--
Metal, primary:					
Smelter (blister)	1,281	--	--	--	--
Refined, electrolytically	342	--	--	--	--
Iron and steel :					
Pig iron <sup>e</sup>	10,000	--	--	--	--
Crude steel <sup>e</sup>	15,600	64,700	94,100	96,600	93,000 <sup>3</sup>
Rolled steel	8,700	--	--	--	--
INDUSTRIAL MINERALS					
Cement, hydraulic	106	180	--	--	578 <sup>r</sup>
Clay, kaolin <sup>e</sup>	422	420	385	350	300
Dolomite <sup>e</sup>	50,000	50,000	50,000	50,000	50,000
Fertilizer, manufactured, phosphatic	8,600	--	--	--	--
Nitrogen, N content of ammonia <sup>e</sup>	10,000	--	--	--	--
Olivinite <sup>e</sup>	300	200	200	200	200
Phosphate rock (12% - 15% P <sub>2</sub> O <sub>5</sub> ) <sup>e</sup>	1,000	--	--	--	--
Salt	10,000 <sup>e</sup>	20,000 <sup>r</sup>	25,783 <sup>r</sup>	22,746 <sup>r</sup>	21,448 <sup>3</sup>
Sulfuric acid <sup>e</sup>	500	-- <sup>r</sup>	-- <sup>r</sup>	-- <sup>r</sup>	--
MINERAL FUELS AND RELATED MATERIALS					
Asphalt and bitumen, natural <sup>4</sup>	16,625	16,000	--	4,200	42,076 <sup>3</sup>
Coal, lignite	28,000 <sup>r</sup>	20,600	16,400	20,300	18,000 <sup>3</sup>
Gas, natural, gross production <sup>5</sup>	14,167	11,490	10,980	9,150	11,617 <sup>3</sup>
Petroleum coke	47,543	46,000	45,000	40,000	57,541 <sup>3</sup>
Petroleum, crude	323,009	314,000	329,370 <sup>r</sup>	350,038 <sup>r</sup>	359,253 <sup>3</sup>

<sup>e</sup>Estimated. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Table includes data available through August 2004.

<sup>2</sup>In addition to the commodities listed, a variety of industrial minerals and construction materials (common clay, quartz, titanomagnetite, stone, and sand and gravel) are produced, but output is not reported quantitatively, and available information is inadequate to make reliable estimates of output levels.

<sup>3</sup>Reported figure.

<sup>4</sup>Includes asphalt and bitumen produced at petroleum refineries.

<sup>5</sup>Separate data on marketable production are not available, but gross and marketed output are regarded as being nearly equal.

TABLE 2  
ALBANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2003<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity	Location of main facilities (all state-owned)	Annual capacity
Cement	Elbasan, 32 kilometers southeast of Tirana; Kruje, 20 kilometers northwest of Tirana; Shkoder, 85 kilometers northwest of Tirana; and Vlore, southwest of Tirana	1,200
Chromite	Bater (including Bater I and II and Martanesh), 40 kilometers northwest of Tirana	450
Do.	Bulquize (including Bulquize south, Fush, Terrnove, and Todo Maco), 35 kilometers northwest of Tirana	450
Do.	Kalimash, 60 kilometers north of Tirana	250
Do.	Kam, 70 kilometers north of Tirana	100
Do.	Klos, 20 kilometers northeast of Tirana	50
Do.	Pogradec (including Katjtel, Memelisht, Pojske, Pishkash, and Prrnjas), 50 kilometers east of Tirana	100
Coal, lignite	Maneze, Mezes, and Valias Mines in Tirana Durres area; Krabe Mine, 20 kilometers southeast of tirana; Alarup and Cervnake Mines, in Pogradec area, 80 kilometers southeast of Tirana; Mborje-Drenove Mine in Korce area, 85 kilometers southwest of Tirana; and Memaliaj Mine in Tepelene area, 110 kilometers south of Tirana	2,500
Copper:		
Ore	Fushe-Arrez, 80 kilometers north of Tirana	350
Do.	Gjejan, 100 kilometers northeast of Tirana	150
Do.	Golaj (including Nikoliq and Pus), 120 kilometers northeast of Tirana	150
Do.	Kurbnesh-Perlat, 55 kilometers northeast of Tirana	100
Do.	Rehove, 110 kilometers southeast of Tirana	100
Do.	Reps (including Gurch, Lajo, Spac, and Thurr), 55 kilometers north of tirana	350
Do.	Rreshen, 50 kilometers north of Tirana	50
Do.	Shkoder (including Palaj, Karma I and II), 85 kilometers northwest of Tirana	100
Smelter	Kukes, 110 kilometers northeast of Tirana	6
Do.	Lac, 35 kilometers northwest of Tirana	7
Do.	Rubik, 50 kilometers north of Tirana	4
Ferrochromium	Burrel, 35 kilometers northeast of Tirana	40
Do.	Elbasan, 32 kilometers southeast of Tirana	36
Iron ore	Prrnjas (Bushtrica, Prrnjas, Skorska I and II), 70 kilometers southeast of Tirana	650
Do.	Guri i Kuq (including Cervenake, Grasishta, Guri i Kuq, Hudenisht and Guri Pergjrgjur), 25 kilometers east of Tirana	500
Natural gas	million cubic feet Gasfields on southwest Albania between Ballsh and Fier	16,000
Nickel, smelter	Elbasan	6
Petroleum:		
Crude	42-gallon barrels per day Oilfields at Marineze, Ballsh, Shqisht, Patos, Kucova, Gorrish, and others	35,000
Refined	do. Refineries: Ballsh, Cerrik, Fier, and Stalin	33,000
Steel	Steel of the Party Metallurgical Combine at Elbasan	150

<sup>1</sup>A substantial portion of these enterprises have been operating significantly below capacity during the transition to a market economy; the capacities provided in this table represent only the latest available information and may not show the true status of these enterprises.

TABLE 3  
BOSNIA AND HERZEGOVINA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	1999	2000	2001	2002	2003
<b>METALS</b>					
Aluminum:					
Bauxite	200,000 <sup>e,r</sup>	254,664 <sup>r</sup>	90,027 <sup>r</sup>	71,312 <sup>r</sup>	229,317 <sup>3</sup>
Alumina, metallurgical grade	200,000	208,435	30,928	--	35,011 <sup>3</sup>
Metal, ingot; primary and secondary	57,004 <sup>r</sup>	94,751 <sup>r</sup>	95,064 <sup>r</sup>	102,271 <sup>r</sup>	112,503 <sup>3</sup>
Iron and steel:					
Ore and concentrate:					
Gross weight	300,000 <sup>e,r</sup>	363,351 <sup>r</sup>	264,540 <sup>r</sup>	212,114 <sup>r</sup>	126,929 <sup>3</sup>
Fe content	150,000	182,000	132,000	106,000	63,000
Metal:					
Ferroalloys <sup>e</sup>	15,000	20,000	20,000	20,000	20,000
Pig iron <sup>e</sup>	45,000	57,000	60,000	60,000	60,000
Crude steel	59,670 <sup>r</sup>	134,341 <sup>r</sup>	138,685 <sup>r</sup>	115,222 <sup>r</sup>	166,368 <sup>3</sup>
Semimanufactures <sup>e</sup>	75,000	16,000	160,000	150,000	150,000
Lead:					
Concentrate	1,150 <sup>e</sup>	1,137 <sup>r</sup>	3,271 <sup>r</sup>	--	-- <sup>3</sup>
Metal, smelter, primary and secondary <sup>e</sup>	100	100	100	100	100
Manganese ore: <sup>e</sup>					
Gross weight	2,000	2,000	2,000	2,000	2,000
Mn content	500	500	500	500	500
Zinc concentrate	2,100	2,274	3,432	--	-- <sup>3</sup>
<b>INDUSTRIAL MINERALS</b>					
Asbestos, all kinds <sup>e</sup>	500	500	500	500	500
Barite concentrate <sup>e</sup>	2,000	2,000	2,000	2,500	2,500
Cement	thousand tons	547,303 <sup>r</sup>	628,214 <sup>r</sup>	703,843 <sup>r</sup>	912,611 <sup>r</sup>
Clays:					
Bentonite	5 <sup>r</sup>	5 <sup>r</sup>	9,829 <sup>r</sup>	13,050 <sup>r</sup>	16,500 <sup>3</sup>
Fireclay, crude	10 <sup>e</sup>	15	34	10	-- <sup>3</sup>
Ceramic clay, crude	55,000 <sup>e</sup>	57,028 <sup>r</sup>	40,097 <sup>r</sup>	4,340 <sup>r</sup>	35,861 <sup>3</sup>
Kaolin:					
Crude	3,000 <sup>e</sup>	-- <sup>r</sup>	13,000 <sup>r</sup>	6,500 <sup>r</sup>	-- <sup>3</sup>
Calcined	1,500	-- <sup>r</sup>	5,000 <sup>r</sup>	3,000 <sup>r</sup>	-- <sup>3</sup>
Dolomite, crude	35,000 <sup>e</sup>	37,121	49,073	96,584	96,776 <sup>3</sup>
Gypsum:					
Crude	30,000 <sup>e</sup>	26,826 <sup>r</sup>	76,100 <sup>r</sup>	44,200 <sup>r</sup>	77,500 <sup>3</sup>
Calcined	3,000 <sup>e</sup>	6,605 <sup>r</sup>	6,052 <sup>r</sup>	6,504 <sup>r</sup>	6,042 <sup>3</sup>
Lime	105,000 <sup>r</sup>	109,650 <sup>r</sup>	88,839 <sup>r</sup>	58,316 <sup>r</sup>	72,765 <sup>3</sup>
Magnesite, crude	2,000	2,000	2,000	2,000	2,000
Nitrogen, N content of ammonia	500	500	500	500	500
Quartz, quartzite, glass sand <sup>e</sup>	50,000	50,000	50,000	50,000	50,000
Salt, all sources	78,000	93,000	90,000	98,000	84,000 <sup>3</sup>
Sand and gravel, excluding glass sand	thousand cubic meters	450 <sup>e,r</sup>	400 <sup>r</sup>	348 <sup>r</sup>	362 <sup>r</sup>
Sodium compounds:					
Soda ash	-- <sup>3</sup>	49,495 <sup>3</sup>	36,882 <sup>3</sup>	-- <sup>3</sup>	11,804 <sup>3</sup>
Caustic soda <sup>e</sup>	5,000	5,000	5,000	5,000	5,000
Sodium bicarbonate <sup>e</sup>	500	500	500	500	500
Stone (excluding quartz and quartzite), dimension, crude:					
Ornamental	square meters	20,000 <sup>e</sup>	23,800 <sup>r</sup>	41,700 <sup>r</sup>	35,900 <sup>r</sup>
Other	cubic meters	--	--	10,540	11
Crushed and brown, n.e.s.	thousand cubic meters	300 <sup>r</sup>	277 <sup>r</sup>	231 <sup>r</sup>	321 <sup>r</sup>
Sulfur, byproduct of metallurgy <sup>e</sup>		1	1	1	--
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Brown coal and lignite	thousand tons	6,800 <sup>e</sup>	7,441 <sup>r</sup>	7,579 <sup>r</sup>	7,799 <sup>r</sup>
Petroleum refinery products		600,000 <sup>e,r</sup>	608,000	326,000 <sup>r</sup>	291,000 <sup>r</sup>

<sup>e</sup>Estimated. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Table includes data available through August 2003.

<sup>2</sup>In addition to commodities listed, common clay was also produced, but available information is inadequate to make reliable estimates of output levels.

<sup>3</sup>Reported.

TABLE 4  
BOSNIA AND HERZEGOVINA: STRUCTURE OF THE MINERAL INDUSTRY IN 2003

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Alumina		Energoinvest	Plants at Birac-Zvornik	600
Do.		do.	Plant at Mostar	280
Aluminum		Aluminij d.d. Mostar	Smelter at Mostar	92
Bauxite		Energoinvest	Mines at Vlasenica, Jajce, Bosanska Krupa, Posusje, Listica, Citluk, and other locations.	2,000
Cement		Tvornica Cementa Kakanj d.d.	Plant at Kakanj	650
Do.		D.D. Fabrica Cementa Lukavac	Plant in Lukavac	340
Coal:				
Brown		SOUR Titovi Rudnici Uglja, Tuzla	Mines in BiH	12,000
Lignite		do.	do.	7,000
Ferroalloys		Elktrobosna, Elektrohemijska i Eletrotermijska Industrija	Plant at Jajce	80
Iron ore		Rudarsko Metalurski Kombinat Zenica	Mines at Vares, Ljubija, and Radovan	5,000
Lead-zinc ore		Energoinvest	Mine and mill at Srebrenica	300
Manganese ore		Mangan-Energoinvest	Mine and concentrator at Buzim	100
Petroleum, refined	thousand barrels per day	Energoinvest: Rafinerija Nafta Bosanski Brod	Refinery at Bosanski Brod	100
Pig iron		B-H Steel-Zeljezara Ltd. (Kuwait Consulting and Investment, 50%, and Zeljezara Zenica Ltd., 50%)	Blast furnace at Zenica	2,250
Salt	cubic meters per year	Hemijski Kombinat "Sodaso," Rudnik Soli i Solni Bunari	Rock salt: Mines at Tusanj	120,000
Do.	do.	do.	Production from brine at Tuzla, BiH	2,000,000
Steel, crude		B-H Steel-Zeljezara Ltd. (Kuwait Consulting and Investment, 50%, and Zeljezara Zenica Ltd., 50%)	Plant at Zenica	2,060

TABLE 5  
CROATIA: PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Commodity		1999	2000	2001	2002	2003
METALS						
Aluminum:						
Metal, ingot, primary and secondary		14,461	15,050	16,019	--	--
Alloys		843	977	823	812	1,180
Semimanufactures, rolled		29,465	30,161	34,106	33,774	
Ferrochromium		--	15,753	361	--	--
Steel:						
Crude, from electric furnaces		77,213	71,021	57,993	33,851	43,380
Semimanufactures:						
Bars and wire rod		46,665	42,388	31,583	2,078	17,459
Seamless tubes		40,719	36,432	35,297	23,435	25,728
Welded pipe		44,873	26,405	39,935	37,509	67,501
INDUSTRIAL MINERALS						
Cement	thousand tons	2,712	2,852	3,246	3,378	3,654
Clays <sup>3</sup> :						
Bentonite		8,441	10,013	10,580	12,102 <sup>r</sup>	13,568
Ceramic clay <sup>e</sup>		6,000	6,100 <sup>4</sup>	6,000	6,000	6,000 <sup>e</sup>
Fire clay, crude <sup>e</sup>		3,000	--	--	--	--
Gypsum:						
Crude		137,991	150,765	130,861	145,000 <sup>r</sup>	166,000
Calcined		1,236	1,176	1,217	1,200	1,400
Lime	thousand tons	198	220	253	269	251
Nitrogen, N content of ammonia	do.	387 <sup>r</sup>	395 <sup>r</sup>	316 <sup>r</sup>	289 <sup>r</sup>	322
Pumice and related materials, volcanic tuff	do.	55	38	42	41 <sup>r</sup>	29
Salt, all sources		18,477	33,668	32,585	36,885	31,281
Sand and gravel, excluding glass sand	thousand cubic meters	3,644	3,480	3,500	4,650 <sup>r</sup>	4,878
Silica:						
Quartz, quartzite, glass sand		211,572	211,705 <sup>r</sup>	252,013 <sup>r</sup>	275,121 <sup>r</sup>	237,141
Glass:						
Flat glass	thousand square meters	362	302	305	390	495
Container glass		122,430	127,758	140,570	148,612	171,070
Other hollow glass		1,824	1,936	1,631	1,711	1,466
Stone, excluding quartz and quartzite, dimension stone, crude:						
Ornamental	square meters	1,155,281	1,063,901 <sup>r</sup>	1,044,944	1,127,948	1,093,573
Crushed and brown, n.e.s.	thousand tons	11,871	10,801	12,941	14,736	19,022
Other <sup>e</sup>	cubic meters	20,000	25,000	25,000	25,000	25,000
Sulfur, byproduct of petroleum <sup>e</sup>		15,000	15,000	15,000	7,069 <sup>r</sup>	7,471
MINERAL FUELS AND RELATED MATERIALS						
Carbon black		17,589	20,029	21,180	19,386 <sup>r</sup>	21,497
Coal, bituminous	thousand tons	15	--	--	--	--
Natural gas, gross production	million cubic meters	1,551	1,659 <sup>r</sup>	2,010	2,122	2,190
Petroleum, crude:						
As reported	thousand tons	1,293	1,214	1,121	1,108	1,052
Refinery products		5,639,000	5,322,000	5,400,000	4,513,338 <sup>r</sup>	4,742,012

<sup>e</sup>Estimated. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Table includes data available through June 2004.

<sup>2</sup>Estimated data are rounded to no more than three significant digits.

<sup>3</sup>In addition to commodities listed, common clay also was produced, but available information is inadequate to make reliable estimates of output levels.

<sup>4</sup>Reported figure.

TABLE 6  
CROATIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2003

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Alumina		Jadral, Jadranski Aluminijum	Jadral Alumina Plant	150
Aluminum		Boris Kidric Tvornica Lakih Metala	Smelter at Sibenik	75
Do.		Top-Tvornica Olovni i Aluminjskikh	Semimanufactures producer at Savska	NA
Cement		Dalmacija Cement	Sv. Juraj plant at Kastel Sucurac	1,300
Do.		do.	Sv. Kajo plant at Solin	750
Do.		do.	Majdan plant at Solin Majdan	780
Do.		Istra Cement International D.D.	Plant at Pula	70
Do.		Tvornica Cementa Koromacno	Plant at Koromacno	420
Do.		Tvornica Cementa Umag D.D.	Cement plant at Umag	480
Do.		Nasicecement D.D.	Nacise plant at Tajnovac	840
Coal, bituminous		Istarski Ugljenokopi Rasa	Mines at Labin and Potpican	500
Natural gas	million cubic feet	Industrija Nafted.d. Zagreb (INA)	Main natural gasfields at Bogsic Lug, and Molve	70,000
Petroleum, crude	thousand barrels per day	do.	Oilfields in Croatia and Slovenia (Benicanci, Zutica, Struzec, Ivanic Grad, Lendava, and others locations)	70
Do.	do.	do.	Refineries at Urinj and Rijeka	160
Do.	do.	do.	Refinery at Sisak	150
Pig iron		Metalurski Kombinat Zeljezara Sisak	2 blast furnaces at Sisak	235
Salt	cubic meters	Solana Pag, Solana Ante Festin	Marine salt: Pag Island	13
Steel, crude		SP MK Zeljezare Sisak d.d.	Plant at Sisak	75
Do.		Jadranska Zeleljzara Split	Plant at Split	170

NA Not available.

TABLE 7  
MACEDONIA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES<sup>1, 2</sup>

(Metric tons unless otherwise specified)

Commodity <sup>3</sup>	1999	2000	2001	2002	2003
<b>METALS</b>					
Aluminum, metal, ingot, secondary	5,000	4,500	4,000	4,000	4,000
Cadmium, smelter output kilograms	236	335	73	111	-- <sup>4</sup>
Copper, mine and concentrator output:					
Ore, gross weight thousand tons	2,000	2,000	1,500	1,200	1,200
Concentrate, gross weight	20,000	5,000	25,000	15,000	15,000
Concentrate, Cu content	9,000	6,000	9,000	5,600	4,000 <sup>4</sup>
Gold kilograms	750	750	500	500	400
Iron and steel:					
Iron ore:					
Gross weight	20,000	20,000	20,000	20,000	20,000
Fe content of ore	1,000	1,000	1,000	1,000	1,000
Concentrate	15,000	15,000	10,000	10,000	10,000
Pellets	10,000	10,000	10,000	10,000	10,000
Agglomerate	5,000	5,000	5,000	5,000	5,000
Metal:					
Ferroalloys:					
Ferronickel (38% Ni), gross weight	5,000 <sup>4</sup>	--	10,300	17,000 <sup>4</sup>	17,000
Ferrosilicon	73,000	65,000	60,000	60,000	60,000
Silicon	--	--	--	--	--
Total	78,000	65,000	60,000	77,000	77,000
Steel, crude <sup>4</sup>	45,000	161,000	217,758 <sup>r</sup>	224,601 <sup>r</sup>	291,354
Semimanufactures <sup>4</sup>	159,643	244,044	296,279 <sup>r</sup>	261,886 <sup>r</sup>	305,111
Lead:					
Mine output:					
Ore gross weight (Pb-Zn ore)	670,000	850,000	600,000	200,000	40,000
Concentrate, Pb content <sup>4</sup>	26,000	24,000	20,000	15,000	5,000 <sup>4</sup>
Primary and secondary:					
Smelter	20,000	20,000	8,000	3,500	3,500
Refined	19,738	22,900	19,700	19,800	8,000 <sup>4</sup>
Nickel, metal, Ni content of FeNi	1,900	--	3,100	5,100	5,600 <sup>4</sup>
Silver kilograms	22,000	20,000	15,000	12,000	10,000
Zinc:					
Concentrate, Zn content	21,000	25,000	20,000	10,000	4,000 <sup>4</sup>
Metal, refined, primary and secondary	49,608	62,800	52,000	38,000	15,100 <sup>4</sup>
<b>INDUSTRIAL MINERALS</b>					
Cement thousand tons	520	585	630	600	630
Clays, bentonite	30,000	30,000	25,000	25,000	25,000
Diatomite	5,000	5,000	5,000	5,000	5,000
Feldspar	11,275	10,057	20,449	21,000	21,000
Gypsum:					
Crude	25,000	25,000	20,000	20,000	20,000
Calcined	5,000	5,000	3,000	3,000	3,000
Lime	--	1,000	500	500	500
Pumice and related materials, volcanic tuff	150,000	150,000	50,000	50,000	50,000
Sand and gravel, excluding glass sand thousand cubic meters	150	150	100	100	100
Stone, excluding quartz and quartzite, dimension, crude: square meters	200,000	200,000	150,000	150,000	150,000
Ornamental thousand cubic meters	400	400	300	300	300
Crushed and brown, n.e.s. cubic meters	10,000	10,000	5,000	5,000	5,000
Other thousand tons	29,000	26,000	26,000	25,000	25,000
Sulfur, byproduct of metallurgy					
Talc:					
Crude	900	800	800	800	800
Washed	695	562	557	550	550
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Lignite thousand tons	7,375 <sup>r</sup>	7,516 <sup>r</sup>	8,106 <sup>r</sup>	8,640 <sup>r</sup>	8,360 <sup>4</sup>
Petroleum, refinery products thousand 42-gallon barrels	6,000	6,000	6,000	6,000	6,000

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Estimated data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Table includes data available through May 2004.

<sup>3</sup>In addition to commodities listed, common clay also is produced, but available information is inadequate to make reliable estimates of output levels.

<sup>4</sup>Reported figure.

TABLE 8  
MACEDONIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2003

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity <sup>c</sup>
Cement	Azbestcementa "Usje" Preduzece za Proizvodnju Cementa	Plant at Skopje	2,190
Chromite, concentrate	Jugohrom, Hemijsko-Elektrometalurski Kombinat (HEK)	Concentrator at Radusa	150
Copper ore	Bucim, Rabotna Organizacija za Rudarstvo i Metalurgija za Baker	Mine and mill at Bucim, near Radovis	4000
Ferroalloys	Jugohrom, Hemijsko-Elektrometalurski Kombinat (HEK)-Jegunovce	Plant at Jegunovce	80
Iron ore	Skopje, Rudnici i Zeljezarnica Skopje	Mines at Tajmiste, Demir Hisar, and Damjan	1,000
Lead metal	Zletovo, Topilnica za Cink i Olovo	Imperial smelter at Titov Veles	40
Do.	do.	Refinery at Titov Veles	40
Lead-zinc, concentrate	Sasa-Makedonska Kamenica Mine (Sase, Rudnici za Olovo i Cink)	Mill near Kamenica	65
Lead-zinc ore	Prepobotuvacki, Kombinat Zletovo-Sasa: Sase, Rudnici za Olovo i Cink	Mine near Kamenica	300
Do.	Zletovo, Rudnici za Olovo i Cink	Mine and mill near Probistip	700
Nickel: <sup>1</sup>			
Ore	Feni Industries	Mine and opencast mine near Kavadarci	2,300
Metal	do.	Ferronickel plant at Kavadarci	7
Steel, crude	Makstil A.D. Skopje (Duferco Group, 54.4%)	Plant at Skopje	260
Zinc metal	Zletovo, Topilnica za Cink i Olovo	Imperial Smelter plant and refinery at Titov Veles	65

<sup>1</sup>Nickel in ferronickel.



TABLE 9  
SERBIA AND MONTENEGRO: PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Commodity <sup>3</sup>	1999	2000	2001	2002	2003
METALS					
Aluminum:					
Gross weight:					
Alumina, calcined	156,012	186,135	200,660 <sup>r</sup>	237,396 <sup>r</sup>	225,000
Bauxite	500,000	630,000	610,000	612,000	540,000
Metal, ingot, primary and secondary	72,505	88,151	100,176	111,689	116,744
Antimony, metal	--	--	--	--	--
Bismuth, metal kilograms	--	--	--	--	--
Cadmium do.	--	--	--	--	--
Copper:					
Mine and concentrator output:					
Ore, gross weight thousand tons	15,975	12,896	7,123	7,968	5,710
Cu content of ore	62,777	52,000 <sup>e</sup>	28,000 <sup>e</sup>	32,000	22,000 <sup>e</sup>
Concentrate, gross weight	272,172	200,000 <sup>e</sup>	150,000 <sup>e</sup>	185,000 <sup>e</sup>	102,000 <sup>e</sup>
Concentrate, Cu content	69,500	56,100	31,000	36,900	26,400
Metal:					
Blister and anodes:					
Primary	54,000	33,800 <sup>r</sup>	24,000 <sup>r</sup>	30,000 <sup>r</sup>	9,000
Remelted	49,782	45,000 <sup>e</sup>	35,000 <sup>e</sup>	30,000 <sup>e</sup>	4,600
Total	103,782	78,800	59,000	60,000	13,600
Refined:					
Primary	49,902	31,432	22,465	26,897	9,000 <sup>e</sup>
Remelted	1,902	14,200 <sup>e</sup>	10,000 <sup>e</sup>	9,000 <sup>e</sup>	5,029 <sup>e</sup>
Total	51,804	45,632	32,365 <sup>e</sup>	35,897	14,029
Gold, refined kilograms	1,260	1,121	600 <sup>r</sup>	900	600 <sup>e</sup>
Iron and steel:					
Ore and concentrate, agglomerate	2,088	1,115	--	--	-- <sup>e</sup>
Metal:					
Ferroalloys, ferronickel	--	--	--	--	-- <sup>e</sup>
Pig iron	134,882	563,000	461,000	485,000	635,000
Crude steel	226,240	682,000	598,000	596,000	722,000
Semimanufactures	334,000	880,000	801,000	877,000	926,000
Lead:					
Mine and concentrate output:					
Ore, gross weight (Pb-Zn ore)	349,000 <sup>r</sup>	733,000 <sup>r</sup>	531,000 <sup>r</sup>	284,000 <sup>r</sup>	183,000
Pb content of ore <sup>e</sup>	3,800 <sup>r</sup>	22,000 <sup>r</sup>	5,800 <sup>r</sup>	3,100 <sup>r</sup>	2,000
Concentrate, gross weight <sup>e</sup>	10,500 <sup>r</sup>	38,000	16,000	8,500 <sup>r</sup>	5,500
Pb content of concentrate <sup>e</sup>	3,500 <sup>r</sup>	12,500	5,200 <sup>r</sup>	2,800 <sup>r</sup>	1,800
Metal, primary and secondary:					
Smelter	--	1,500	--	-- <sup>e</sup>	-- <sup>e</sup>
Refined	--	1,242	--	--	-- <sup>r</sup>
Magnesium, metal	1,203	1,270	1,500 <sup>r</sup>	1,800 <sup>e</sup>	1,500 <sup>e</sup>
Nickel, metal, Ni content of Fe Ni	--	--	--	--	-- <sup>e</sup>
Platinum-group metals:					
Palladium kilograms	21	21 <sup>e</sup>	10	10 <sup>e</sup>	8 <sup>e</sup>
Platinum do.	3	3 <sup>e</sup>	1	1 <sup>e</sup>	1 <sup>e</sup>
Selenium do.	20,080	21,000	14,000	15,000 <sup>e</sup>	5,000 <sup>e</sup>
Silver do.	7,643	9,068	5,745	6,838	2,028
Zinc:					
Zn content of Pb-Zn ore <sup>e</sup>	14,300	21,000	15,000	9,300	7,500
Concentrator output, gross weight <sup>e</sup>	11,000	9,500	17,500	20,300	5,000
Zn content of concentrate <sup>e</sup>	3,615	3,266	5,988 <sup>r</sup>	6,900	1,900
Refined	683	8,291	13,467	1,478	62

See footnotes at end of table.

TABLE 9--Continued  
SERBIA AND MONTENEGRO: PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

(Metric tons unless otherwise specified)

Commodity <sup>3</sup>	1999	2000	2001	2002	2,003
<b>INDUSTRIAL MINERALS</b>					
Asbestos fiber, all grades	361	563	194	372	111
Cement thousand tons	1,575	2,117	2,418	2,396	2,075
Clays:					
Bentonite	77	75 <sup>e</sup>	75 <sup>e</sup>	75 <sup>e</sup>	75 <sup>e</sup>
Ceramic clay	29,420	30,000 <sup>e</sup>	30,000 <sup>e</sup>	30,000 <sup>e</sup>	25,000
Fire clay:					
Crude	25,766	30,000 <sup>e</sup>	30,000 <sup>e</sup>	30,000 <sup>e</sup>	30,000 <sup>e</sup>
Calcined <sup>c</sup>	4,000	10,000 <sup>e</sup>	10,000 <sup>e</sup>	10,000 <sup>e</sup>	10,000 <sup>e</sup>
Kaolin, crude	40,321	39,475	60,900	60,000 <sup>e</sup>	60,000 <sup>e</sup>
Feldspar, crude	3,453	4,254	4,451	4,500 <sup>e</sup>	4,000 <sup>e</sup>
Gypsum, crude	33,962	46,651	58,045	55,000 <sup>e</sup>	50,000 <sup>e</sup>
Lime thousand tons	381	499	467	468	402
Magnesite:					
Crude do.	31	41	36	33	24
Caustic calcined	2,000	3,000 <sup>e</sup>	2,500 <sup>e</sup>	2,500 <sup>e</sup>	2,000
Mica, all grades	229	230 <sup>e</sup>	230 <sup>e</sup>	200 <sup>e</sup>	200 <sup>e</sup>
Nitrogen, N content of ammonia	75,788	60,000 <sup>e</sup>	65,900	65,000 <sup>e</sup>	60,000
Pumice and related volcanic materials, volcanic tuff	50,000	120,000 <sup>e</sup>	100,000 <sup>e</sup>	100,000 <sup>e</sup>	100,000
Silica:					
Quartz sand	253,106	418,060	301,402	258,801	260,880
Glass					
Salt, all sources	63,834	78,277	61,646	42,243	78,271
Sand and gravel, excluding glass sand thousand cubic meters	2,006	2,675	1,967	2,074	1,507
Sodium compounds:					
Caustic soda	13,720	7,415	7,584	6,787	7,450
Sodium sulfate	1,321	800 <sup>e</sup>	800	800 <sup>e</sup>	800
Stone, excluding quartz and quartzite, dimension, crude:					
Ornamental square meters	157,000	158,000	84,000	103,000 <sup>r</sup>	69,000
Crushed and broken, n.e.s. thousand cubic meters	1,937	3,000 <sup>e</sup>	3,000 <sup>e</sup>	3,000 <sup>e</sup>	2,000 <sup>e</sup>
Other, stone blocks cubic meters	786	1,000 <sup>e</sup>	1,000 <sup>e</sup>	1,000 <sup>e</sup>	500 <sup>e</sup>
Sulfur, byproduct: <sup>c</sup>					
Metallurgy thousand tons	100	100 <sup>e</sup>	100	75 <sup>e</sup>	40 <sup>e</sup>
Petroleum do.	1	1 <sup>e</sup>	1	1 <sup>e</sup>	1 <sup>e</sup>
Total do.	101	101	101	76 <sup>e</sup>	41
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Coal:					
Bituminous do.	49	88	70	70	54
Brown do.	413	398	376	423	377
Lignite do.	30,967	31,789	32,936	32,995	34,543
Total do.	31,429	32,275	33,382	33,488	34,974
Natural gas, gross production million cubic meters	679 <sup>r</sup>	729 <sup>r</sup>	506 <sup>r</sup>	400 <sup>r</sup>	364
Petroleum:					
Crude, as reported thousand tons	705	805	746	682	671
Refinery products do.	1,047	1,052	1,793	2,369	2,380

<sup>c</sup>Estimated. <sup>r</sup>Revised. -- Zero.

<sup>1</sup>Estimated data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Table includes data available through June 2004.

<sup>3</sup>In addition to commodities listed, common clay and diatomite also are produced, and tellurium may be recovered as a copper refinery byproduct, but available information is inadequate to make reliable estimates of output levels.

TABLE 10  
SERBIA AND MONTENEGRO: STRUCTURE OF THE MINERAL INDUSTRY IN 2003

(Thousand of metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity
Alumina	Kombinat Aluminijuma Titograd	Plant at Titograd, Montenegro	200.
Aluminum	do.	Smelter at Titograd, Montenegro	100.
Antimony, ores and concentrates	Zajaca, Rudarsko Tapioncarski Bazen	Mines and mills near Zajaca, Serbia	80.
Do.	do.	Mines and mill at Rajiceva Gora, Serbia	300.
Antimony, metal	do.	Smelter at Zajaca, Serbia	4.
Bauxite	Rudnici Boksita, Niksic	Mines in Montenegro at Kutsko Brdo, Zagrad, Biocki Stan, Durakov Dol, and other locations	650.
Cement	Becinska Fabrika Cementa	Plant at Beocin, Serbia	2,031.
Do.	Fabrika Cementa Novi Popovac	Plant at Popovac, Serbia	1,613.
Coal:			
Bituminous	Ibarski Rudnici Kamenog Uglja	Mines at Jarando and Usce, near Baljevac na Ibru, Serbia	250.
Lignite	SOUR Kolubara, Rudarsko Energetsko Industrijski Kombinat, RO	Opencast mines: Polje B and Polje D	10,000.
Do.	Kolubara Povrsinski Kopovi	Tamnavski Kopovi (also known as Kolubarski Rudnici Lignita), near Vreoci, Serbia	14,000.
Do.	SOUR Elektroprivreda Kosova, RO Kosovo, Proizvodnja Separacija i Transport Uglja	Opencast mines: Dobro Selo and Belacevac, near Obilic, Serbia	2,000.
Copper	Rudarsko Topionicki Bazen Bor	Smelter at Bor, Serbia	180.
Do.	do.	Electrolytic refinery at Bor, Serbia	180.
Do.	do.	Mine and mill at Bor, Serbia	5,000 ore.
Do.	do.	Mine and mill at Majdanpek, Serbia	15,000 ore.
Do.	do.	Mine and mill at Veliki Krivelj, Serbia	8,000 ore.
Lead, metal	Rudarsko Metalursko Hemijski Kombinat za Olovo i Cink Trepca	Smelter at Zvecan, Serbia	180.
Do.	do.	Refinery at Zvecan, Serbia	90.
Lead-zinc ore	Rudarsko-Metalursko-Hemijski Kombinat za Olovo i Cink Trepca	Mines at Ajvalija, Kopanaonik, Badovac; Trepca, Blagodat, Lece; Veliki Majdan, Tisovak; and Kisnica, Rudnik, Suplja Stijena	5,000.
Do.	do.	Mills at Kriva Feja, Lece, Rudnik, Badovac, Leposavic, Zvecan, and Maravce, Suplja Stijena	3,160.
Do.	Hemijska Industrija Zorka: Brskovo, Rudnici Olova i Cinka	Mine at Brskovo, Montenegro	500.
Do.	Veliki Majdan Rudnik Olova i Cinka	Mine at mill near Krupanj, Serbia	250.
Magnesite, concentrate	Rudnici Magnezita "Sumadija"	Mine and plant at Sumadija, 20 kilometers northwest of Cacak, Serbia	120.
Do.	Rudnik i Industrija Magnezita "Strezovce"	Opencast mine at Beli Kamen, Strezovce, near Itiova Metrovica, Serbia	300.
Do.	do.	Sinter plant at Strezovce	40.
Do.	Magnohrom, Rudnik Magnezita "Magnezit"	Mine at Bela Stena, Baljevac na Ibru, Serbia	30.
Natural gas	million cubic feet Naftaplin (Naftagas), RO za Istrazivanje, i Provoznuju Nafte i Gasa	Natural gasfields in Serbia Kinkinda and others	30,000.
Petroleum:			
Crude	thousand barrels per day Naftagas, Naftna Industrija	Oilfields in Serbia: Kikinda and others	30.
Refined	do. Naftagas, Naftna Industrija: Rafinerija Nafte Pancevo	Refinery at Pancevo, Serbia	110.
Do.	do. Rafinerija Nafte Novi Sad	Refinery at Novi Sad, Serbia	28.
Pig iron	Metalurski Kombinat, Smederevo	Blast furance at Smederevo, Serbia	720.
Steel, crude	do.	Plant at Smederevo, Serbia	600.
Zinc metal	Rudarsko Metalursko Hemijski Kombinat Olova i Cinka Trepca, Metalurgija Cinka	Electrolytic plant at Titova Metrovica, Serbia	40.
Do.	Hemijska Industrija Zorka	Electrolytic plant at Sabac, Serbia	40.

TABLE 11  
SLOVENIA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES<sup>1, 2</sup>

(Metric tons unless otherwise specified)

Commodity	1999	2000	2001	2002	2003
<b>METALS</b>					
Aluminum, ingot, primary and secondary	77,200	83,800	76,632	87,600	109,800 <sup>3</sup>
Iron and steel, metal:					
Ferroalloys:					
Ferrochromium	560	--	--	--	--
Ferrosilicocalcium	200	200	100	100	--
Ferrosilicon	8,000	9,000	9,000	9,000	9,000
Crude steel from electric furnaces	405,000	519,000	462,000	481,000	543,000 <sup>3</sup>
Semimanufactures	418,000	466,000	450,000	400,000	594,000 <sup>3</sup>
Lead, refined, secondary	14,100	15,300	15,400	15,400 <sup>r</sup>	15,000
<b>INDUSTRIAL MINERALS</b>					
Cement	thousand tons	1,224	1,300	1,300	1,250
Clays:					
Bentonite		5,568 <sup>r</sup>	4,657 <sup>r</sup>	3,738 <sup>r</sup>	4,122 <sup>r</sup>
Lime	thousand tons	150	150	150	150
Pumice and related materials, volcanic tuff <sup>e</sup>		40,000	40,000	40,000	40,000
Quartz, quartzite, glass sand		210,000	210,000	200,000	200,000
Salt, all sources		143,054 <sup>r</sup>	98,702 <sup>r</sup>	107,755 <sup>r</sup>	128,212 <sup>r</sup>
Sand and gravel, excluding glass sand	thousand tons	12,419	12,526	11,510	10,897 <sup>r</sup>
Stone, excluding quartz and quartzite, crude: <sup>e</sup>					
Dimension		104,000	78,000	45,000 <sup>r</sup>	6,858 <sup>r</sup>
Other	cubic meters	3,000	3,000	3,000	3,000
<b>MINERAL FUELS AND RELATED MATERIALS</b>					
Coal:					
Brown coal	thousand tons	758	737	685	639 <sup>r</sup>
Lignite	do.	3,804	3,743	3,448	4,048 <sup>r</sup>
Natural gas	thousand cubic meters	5,700	6,800	6,100	6,000
Petroleum, crude		800	600	700	763 <sup>r</sup>

<sup>r</sup>Revised. -- Zero.

<sup>1</sup>Table includes data available through June 2003.

<sup>2</sup>In addition to the commodities listed, common clay, coke, and petroleum products also were produced, but available information is inadequate to make reliable estimates of output levels.

<sup>3</sup>Reported

TABLE 12  
SLOVENIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2003

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies	Location of main facilities	Annual capacity
Alumina	Talum d.o.o.	Plant at Kidricevo	120
Aluminum	do.	Smelter at Kidricevo	72
Cement	Salonit Anhovo	Plant at Anhovo	1,120
Coal:			
Brown	SOZC, Rudarsko Energetski Kombinat E. Kardelj, Trobovlje, Slovenia	Mines: Sasavski Rudnici at Trbovlje, Hrastnik, Ojstro, Senovo, and Kanizarnica	1,300
Lignite	Rudarsko Energetski Kombinat Velenje, RO Rudnik Lignita-Velenje	Mine at Velenje	5,000
Lead metal	Rudnik Svinca in Topilnica, Mezica	Smelter at Mezica	35
Do.	do.	Refinery at Mezica	30
Petroleum, refined	Industrija Naft (INA) Rafinerija Naft Lendava	Refinery at Lendava	16
Pig iron	Združeno Podjetje Slovenske Železarne	Two blast furnaces at Zelazara Jesenice	300
Do.	Železara Store	Electric reduction furnaces at Store pri Celju	290
Steel, crude	Združeno Podjetje Slovenske Železarne	Plant at Jesenica	500
Do.	do.	Plant at Ravne	162
Do.	do.	Plant at Store	140